On the arithmetic of tiled orders

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Abstract

This thesis investigates arithmetic and algebraic properties of tiled orders in central simple algebras over non-archimedean local fields. To this end, we make extensive use of a building-theoretic framework that allows us to gain combinatorial and geometric intuition for properties of these local orders. We use this local information and turn to a global setting, where we compute type numbers of global orders. We accomplish this with tools from algebraic number theory, as well as class field theory towards the end of the thesis.